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**THESIS**

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**AN ANALYSIS OF ALTERNATIVE DISPUTE  
RESOLUTION (ADR) AS IT APPLIES TO CONTRACT  
DISPUTE SETTLEMENT AND ITS USE BY THE DEFENSE  
INDUSTRY**

by

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June 1999

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AS IT APPLIES TO CONTRACT DISPUTE SETTLEMENT AND ITS  
USE BY THE DEFENSE INDUSTRY**

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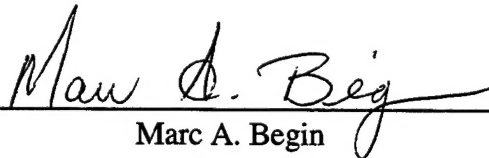
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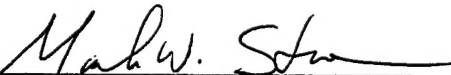
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June 1999**

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## **ABSTRACT**

The objective of this research is to assess the extent to which defense contractors employ the use of Alternative Dispute Resolution (ADR) in their contract dispute settlement processes. A questionnaire was utilized to gather information from thirty defense contractors. The thesis provides a legislative background for ADR, and briefly discusses various techniques of the ADR process. Additionally, data collected from industry are presented and discussed. The study identified mediation and negotiation as the technique favored by commercial companies. Furthermore, this study concludes that Government agencies do not reap the benefits of ADR to the extent that commercial companies do. The use of ADR has taken hold, and its use is likely to increase. However, barriers exist that serve to limit its use by Government agencies. These barriers include education about various ADR techniques and the perception by the defense industry that Government agencies are unwilling to enter into ADR.



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## **I. INTRODUCTION**

### **A. BACKGROUND**

Over the past several years, the Department of Defense (DoD) has pursued acquisition reform to streamline its own processes, in an effort to reduce costs and attract more competition from the civilian sector. In so doing, DoD has tried to emulate those commercial practices that have proven successful to civilian companies. Through this, it has hoped to make itself a more desirable business partner by operating more like a commercial business and minimizing its bureaucratic idiosyncrasies.

Within this reform process is an increased emphasis on empowerment of the individual. The current policy and guidance is no longer one that requires exacting steps or procedures, rather it provides limits and alternatives that serve to guide the acquisition professional in the performance of his duties. Recognizing that several solutions exist to any given problem, the reform initiatives

that have been enacted serve to assist the professional, vice hinder him.

One reform initiative is the expanded use of mediation, arbitration, and other techniques for the prompt and informal resolution of contract disputes. The Administrative Dispute Resolution Act (ARDA) was signed into law on November 15, 1990. It was based upon the recommendations made by the Administrative Conference of the United States (ACUS) in 1986, and encourages Government Contracting Officers to resolve disputes consensually, authorizing them and contractors to use any alternative means of dispute resolution for resolving claims and disputes. The use of such processes in lieu of court litigation can provide considerable benefits in the form of both cost and time savings [Ref. 1]. It also provides the contracting officer with greater latitude when attempting to solve such disputes. This initiative has the potential to be hindered by the unique aspects of contracting with the Federal Government, and therefore may not be an attractive option to the commercial contractors with whom it seeks to do business.

With over ten years of legislation and executive orders behind it, the DoD has attempted to embrace this successful commercial practice. The widespread acceptance of



Alternative Dispute Resolutions (ADR) by the defense industry suggests that the DoD must do more if it is to keep up with its process reforms.

## **B. OBJECTIVES**

This thesis has the following objectives:

1. To provide an overview of ADR, highlighting its objectives, its benefits, and its limitations.

2. To determine the extent to which defense contractors employ the use of ADR in both commercial and Government contract dispute settlements.

3. To draw from industry the perceived incentives and barriers that promote or hinder the use of ADR.

## **C. RESEARCH QUESTIONS**

### **1. Primary**

To what extent does the Defense Industry employ ADR in settling commercial and Government contract disputes and how can the Government use this information to improve its ADR program?

### **2. Secondary**

- What are the company policies with respect to industry's use of ADR?

- What prompted industry to employ ADR as a means to settle contract disputes?
- What methods of ADR do the companies primarily employ?
- To what extent is the use of ADR stipulated on a pre-contractual basis?
- How often is ADR employed when the company is the supplier? When the company is the customer?
- What are the current incentives and barriers that promote/hinder the use of ADR?
- How can the Government improve its ADR program?

#### **D. SCOPE**

The scope of this thesis is to provide information and analysis of the defense industry and its use of ADR in the dispute settlement process. The researcher will assess from a cross-section of companies that have defense and commercial contracting experience the willingness to use ADR and the methods favored.

#### **E. LIMITATIONS**

There is a limited amount of empirical data available to support the opinions and information presented in this

thesis. The information presented on ADR and its background is based upon literary research and historical information.

The recommendations and conclusions drawn from this thesis are limited by the subjective nature of the research. Therefore, the researcher has drawn upon the expert opinion and experiences of those surveyed about the ADR process and a literature review of the subject.

#### **F. ASSUMPTIONS**

This thesis was written under the following assumptions:

1. The reader has a need for information about ADR and the extent to which it is used by defense contractors in contract dispute settlements.
2. The reader has a working knowledge of ADR.
3. The reader has access to legal assistance to clarify and enhance information provided herein.

#### **G. METHODOLOGY**

The methodology for research entails a comprehensive literature review, phone interviews with major defense firms (contract managers and legal personnel), and email surveys with other corporate in-house lawyers, Government representatives, and outside counsel.

The purpose of the literature review is to supply the researcher with sufficient background and insight into the various aspects of ADR. While not exhaustive in nature, the literature was gathered from journals and periodicals to include legal, judicial, management, conflict resolution manuals, and internet web pages. The information provides an adequate sampling and cross section of current ADR topics and trends.

Responses to telephone questionnaires and email surveys are compiled from thirty major defense contractors who also have a great deal of commercial dealings. These companies were selected from a listing of the top 100 Federal Contractors, as determined by a percent of dollars. Other personnel were selected from the Corporate Administrative Contracting Officer (CACO) listing provided by the Defense Contract Management Command (DCMC) or through personal referrals from those contacted.

## **H. BENEFITS**

This thesis provides insight into the Government's existing use of ADR processes. It also solicits from industry their perspective as to what methods serve them best and the shortfalls or limitations they see in the way the DoD employs ADR to settle contract disputes. This input

highlights not only the defense industry's perceptions, but also the areas where DoD could improve its use of ADR.

## **I. THESIS ORGANIZATION**

This thesis consists of five chapters. Chapter I provides a brief introduction to the topic. It establishes the thesis framework and outlines the objectives of the research questions, the scope, limitations, assumptions, and methodology.

Chapter II establishes the overview and historical background of ADR. It also provides information with regard to the legal background of various ADR legislation and ADR objectives. It closes with a brief look at the methods used in ADR.

Chapter III provides information on ADR implementation and the responses provided by those surveyed or interviewed. The impact of ADR on contract dispute settlements is discussed. The incentives and barriers perceived by those who use it are also addressed.

Chapter IV draws upon the responses provided to assess the extent to which ADR is applied to contract dispute settlements. It analyzes the survey results to suggest how the Government can enhance its use of ADR.

Chapter V discusses the conclusions that can be drawn from a thorough analysis of the survey results, and provides recommendations for the Government's future use of ADR to settle contract disputes.

## **II. ALTERNATIVE DISPUTE RESOLUTION OVERVIEW**

### **A. INTRODUCTION**

Alternative Dispute Resolution (ADR) is a term that encompasses a wide range of practices for managing and quickly resolving disputes at modest cost and with minimal adverse impact on the business relationship. ADR, as defined by the Administrative Dispute Resolution Act (ADRA), is:

Any procedure that is used in lieu of an adjudication to resolve issues in controversy, including, but not limited to, settlement negotiations, conciliation, facilitation, mediation, fact-finding, minitrials, and arbitration, or any combination thereof.[Ref. 2]

The movement toward ADR in the United States began just after World War I. The enactment of the New York State Arbitration Statute in 1920 - the first modern arbitration statute in the United States - marks its beginning. Since then, the use of ADR as a means to settle disputes has grown steadily, achieving explosive growth since 1980 [Ref. 3].

This growth is a result of the broad acceptance by businesses, labor groups, legal communities, and many other groups. The judicial system has also recognized its

utility, and today, in many state and federal jurisdictions around the country there are mandatory and voluntary court sponsored ADR programs that have been established to assist parties in reaching settlements without litigation.[Ref. 3]

## **B. LEGAL BACKGROUND**

The trail of legislation enacted to resolve claims against the Government can be traced back as far as 1855. Since that time administrative boards have been established to hear contract claims. It is these boards that formed the foundation for what is referred to today as the Armed Service Board of Contract Appeals (ASBCA). The ASBCA initially started out as a way to hear and resolve claims in a rather informal and speedy manner. Over time it has evolved into a more formalized, judicial, and time-consuming process.[Ref. 4]

In 1978, Congress enacted the Contract Disputes Act (CDA) in response to a study done by the Commission on Government Procurement. This study highlighted inefficiencies in the contract dispute settlement process, and provided recommendations as to how to improve it. The CDA prescribed a process that all disputes were to follow. It established timelines, actions required by various personnel within the chain, and dollar thresholds for



disputes or claims. This was done with the intention of establishing a process by which contract disputes could be settled without causing disruption in the contract performance. It provided the Contracting Officer the authority to use alternative resolution techniques to settle contract disputes while avoiding litigation.[Ref. 5]

Throughout the 1980s, the caseloads handled by the Board of Contract Appeals grew steadily, and the process began to break down. What was intended to be a timely technique had become a judicial process filled with delays and appeals.[Ref. 6]

In 1990, Congress again enacted legislation to deal with Government dispute settlements. The Administrative Dispute Resolution Act (ADRA) was an attempt by Congress to authorize and encourage Federal agencies to use mediation, conciliation, arbitration, and other techniques for the prompt and informal resolution of disputes and for other purposes. Among their findings, Congress stated that ADR had been used in the private sector for many years, and often led to more creative, efficient, and sensible outcomes. Thus the goal of the Act was to:

send a clear message to agencies and private parties that the use of ADR to resolve disputes involving the Federal Government is an accepted practice and to provide support for agency

efforts to develop and/or enhance individual ADR programs. [Ref. 2]

The ADRA was largely based upon recommendations made by the Administrative Conference of the United States (ACUS), and modified the CDA of 1978 in an effort to prompt Contracting Officers to seek resolution in a consensual manner. Additionally, the ADRA set forth the requirements for appointment of ADR specialists in each agency, established procedures for hiring neutral third parties, and provided confidentiality protection to parties who participated in ADR. Furthermore, the Act broadened the Contracting Officer's authority to allow parties to agree to use binding arbitration, within certain guidelines [Ref. 7]. These guidelines stipulated that a arbitral award would not become final and binding against the Federal agency for 30 days. The ADRA allowed for the use of ADR except in the following circumstances:

1. Where a definitive and authoritative decision is needed as a precedent,
2. Where the matter involves significant issues of Government policy and ADR will not assist policy development,
3. Where maintaining established policies is of special importance, so that variation among additional procedures are not increased,
4. Where the matter significantly affects persons or organizations who are not parties to the proceeding,

5. Where a full public record of the proceeding is important and would not be available under ADR procedures,

6. Where the use of ADR would interfere with the ability of the agency to maintain continuing jurisdiction over the matter with authority to alter the disposition.[Ref. 8]

The Act also contained a sunset provision that terminated the authority of agencies to use this act on October 1, 1995.

In 1994, Congress enacted yet another piece of legislation called the Federal Acquisition Streamlining Act (FASA) of 1994. It served to extend the sunset provision of the ADRA from 1 October 1995 to 1 October 1999. Additionally, it required Government Contracting Officers and Federal Government contractors to provide a written explanation as to why they chose not to use a form of ADR to settle a dispute.[Ref. 9]

The Federal Acquisition Reform Act (FARA) and two Executive Orders (E.O. 12979 and E.O. 12988) followed this legislation. The crux of these measures was to further induce the Government agencies to use ADR to settle disputes, protests, and other such claims. They provided continued visibility of ADR and the Government's acceptance of this procedure as an avenue to travel before stepping into the litigation arena. Additionally, these measures

reinforced the requirement to have Government counsel trained in the use of ADR techniques.

In November 1995, Congress passed the Alternative Dispute Resolution Act of 1995, permanently authorizing the ADRA. This 1995 Act eliminated the requirement for Contracting Officers to certify claims below \$100,000, and removed the Government's ability to counter or ignore arbitration decisions [Ref. 10]. But perhaps the most significant change brought about by this Act was improvement to the confidentiality provision. Prior to this Act, all documents generated were subject to the Freedom of Information Act, which was a disincentive to use ADR to settle disputes. The 1995 Act enhanced the confidentiality provisions even further by stipulating that all documents generated by the ADR process were to remain confidential.

In 1998 came the passage of the latest piece of legislation, the ADRA of 1998. The 1998 Act directed each federal trial court to establish some form of ADR for certain civil cases. The Act also provided for the improvement of the confidentiality of ADR, directed the courts to establish standards for the mediators and arbitrators to follow, and authorized the Judicial Conference and the Administrative Office of the U.S. Courts to assist courts with their programs.[Ref. 11]

In summary, the use of ADR by the Federal Government has been fueled by legislative and executive action over the past twenty years. Continual refinement of the ADRA Act, together with FASA and the CDA, have served to show commercial industries that Federal agencies are committed to ensuring that disputes are settled in a timely manner, without the burden of litigation, if possible. Measures to improve the process and enhance its confidential nature have been enacted to show the commercial sector that the Federal Government is committed to the implementation and utilization of ADR whenever it is appropriate.

### **C. OBJECTIVES OF ADR**

The primary objective of ADR is to facilitate a settlement process that avoids the costly and time consuming litigation process. In addition, it is designed to improve the solution set, or potential outcomes, thus achieving higher levels of satisfaction among the parties involved. And lastly, it is intended to be less contentious, more informal, and less rigid, as compared to the normal court processes.[Ref. 12]

## **1. Advantages**

The ADR process is appealing because of the variety of techniques available and its ability to empower the parties involved [Ref. 13]. These advantages are:

a) Time: The parties, not the court system, drive the process. The only element that determines the speed of the process is the eagerness of the parties involved to reach a settlement.[Ref. 14]

b) Choice of the neutral: By using an ADR system, the parties gain assistance of experienced neutrals who they select. The use of neutrals provides for less time being spent of educating the judge or jury about technical or tedious aspects of the subject matter. The parties also have the ability to set the authority level of the neutral prior to the proceedings, thus setting the stage for a higher likelihood of satisfaction with the final settlement.[Ref. 13]

c) Costs: Many of the costly aspects of litigation, such as appeals and motions, are left behind. This fosters the shorter time frame for settlement, less expenditure of resources and results in less money spent overall on the "proceedings".[Ref. 8]

d) Flexibility: The manner in which ADR is conducted can be similar to that of a business meeting, which is less

stringent in its rules and procedures. The process and rules are more adaptive to a particular situation, and thus provide the parties greater latitude and input, increasing the likelihood of agreement to the rules and procedures set forth at the beginning of the process.[Ref. 14]

e) Confidentiality: Under the rules of the ADRA Acts, all documents and proceedings are confidential, and therefore a great contributor to the privacy maintained by both parties. This helps preserve positive working relationships.[Ref. 7]

## **2. Disadvantages**

While the advantages listed above do exist; it is not guaranteed that the use of ADR will be beneficial to all parties all the time. There are areas and circumstances in which the use of ADR is inappropriate. Also, there are facets of its use that can be disadvantageous. They are:

a) Safeguards/Due Process: Opponents of ADR have asserted that opting for the use of ADR in certain instances may damage the parties. By choosing ADR in lieu of litigation, a party may be giving up important substantive rights. [Ref. 15]

b) Good Faith: If used deceptively, a party may employ ADR as a stall tactic. The party could agree to use ADR knowing from the onset that they will not agree to its final

outcome, and choose litigation at some point down the road. This breakdown in good faith can lead to an enhanced adversarial position later.[Ref. 6]

c) Enforcement: The final award or decision reached as a result of an ADR agreement may lack the enforceability and effect that a litigated settle produces. This provides for the possibility that the parties involved may ultimately end up needing a litigated resolution.[Ref. 6]

While these disadvantages are not as numerous as the advantages of ADR, they do provide significant concerns for parties when attempting to decide what route to take. Since the use of this procedure requires agreement to terms by both parties, and professional organizations and the courts now guide the structure of the process, the potential for these disadvantages to occur is diminished. The objective of ADR is to facilitate a timely resolution while preserving the relationship of the parties involved, and to do so with minimal expenditure of resources.

#### **D. METHODS**

The term ADR has been used to describe various systems that attempt to resolve legal disputes. The four primary ADR techniques are mediation, negotiation, arbitration, and mini trials [Ref. 16]. These are the methods most often used



and referred to in the research literature. Additionally, partnering and fact finding are two common methods used under the framework of ADR [Ref. 17]. Other methods do exist, and combinations of the above listed techniques are sometimes used. The important thing to keep in mind is that part of ADR's flexibility is derived from the tailored application of the process and method.

#### **1. Mediation:**

Mediation is one of the most widely used ADR techniques in the commercial sector [Ref. 18]. Mediation involves an attempt by the parties to resolve their dispute with the aid of a neutral third party [Ref. 3]. The mediator is chosen by the parties, and serves in an advisory capacity. Although not authorized to render a judgement in the dispute, the mediator advises each party, in confidence, as to the strengths and weaknesses of their position. The mediator also serves as a catalyst to the parties, facilitating the exchange process and directing the discussions. The parties themselves retain overall control of the process and any agreement that may be reached.[Ref. 8]

Mediation works by providing a way around emotional barriers, personality conflicts, stalled communications, and inflexible positions. It is an appropriate technique when

both parties have enough information to reasonably assess the merits of settlement, with no further need for discovery. The cooperative consensus-based approach of mediation sets the stage for a mutually acceptable resolution that requires less time and far less expenditure of resources than traditional litigation. [Ref. 19]

## **2. Negotiation:**

Negotiation on the other hand, does not involve the use of a third party. It is a process by which the parties engage in direct communication with one another in a voluntary, unstructured, and informal environment. The objective is to reach a mutually acceptable settlement. This method allows for confidentiality of the proceedings and provides the parties direct control over the process. The negotiated settlement is typically the first avenue taken when a dispute arises.

## **3. Arbitration:**

While popular in the commercial sector as a method to settle disputes, arbitration is seldom used to resolve controversial contractual issues.[Ref. 18] Arbitration is the process whereby the parties agree to have a dispute resolved by a neutral third party. The difference here is that the neutral third party will listen to the presentations of the case, the evidence and then render a

decision. This decision may or may not be binding, depending upon the terms set forth at the beginning of the proceedings. [Ref. 1] Whatever the terms agreed upon, the process overall is similar to litigation, and unless a non-binding resolution is sought, the nature of the proceedings is typically adversarial. The process is more formal, though rules of evidence are more relaxed.

Nonbinding arbitration is viewed as a settlement technique more so than binding arbitration, and is useful when other methods have failed. Binding arbitration is a good alternative to litigation, often quicker and less expensive, yet it is typically more costly and time consuming than other methods of ADR. [Ref. 16]

#### **4. Mini-trial:**

The most widely used ADR procedure to resolve Government contractual issues in controversy is the mini-trial. [Ref. 18] The term mini-trial is used to describe a procedure in which a neutral sits on a panel with representatives of the parties who have authority to settle the dispute. [Ref. 13] Each party presents evidence in support of its position to the panel. The panel then negotiates to reach decisions and resolutions.

Mini-trials allow for the parties to retain control over the settlement process, and provide for

confidentiality, since no written record or transcripts are made. The mini-trial process is especially useful when senior-level decisionmakers can participate, since the decision process may involve elements of mediation, arbitration or negotiation, and call for difficult tradeoffs to be made in order to reach a mutually acceptable settlement.

#### **5. Partnering:**

Partnering is where the parties establish a cooperative relationship for resolving problems before they begin. This technique is often referred to as "dispute-avoidance" and seeks to limit the possibility of disputes even arising.

#### **6. Fact-finding:**

Fact-finding (sometimes referred to as information exchange) uses a third party to investigate facts or resolve disputes concerning factual matters, not legal questions. Fact-finding can be useful when parties disagree about technical or factual issues, or when communication is stalled due to lack of information. [Ref. 8]

In summary, ADR takes on numerous techniques or methods, and even uses hybrids of these methods to settle disputes. The most common are mediation, negotiation, arbitration, and the mini-trial. These methods all allow for the parties to control the process to varying degrees,

and provide in most cases for a third party neutral to assist in bringing about resolution. The parties involved decide upon the details and limits of authority of any process at the onset.

## **E. SUMMARY**

This chapter defines ADR, and provides a brief overview of the legislation that was enacted to facilitate its use by the Federal Government. It highlights the limitations of the reach of ADR, and explains some of the essential elements of the legislation.

This chapter also highlights the objectives of the ADR process. It discusses what the use of ADR can achieve, while also giving a balanced view of the advantages and disadvantages inherent to the ADR process.

The chapter concludes with an explanation of the four most popular forms or techniques that encompass ADR. It briefly describes these methods, and discusses the situations for which the individual method is best suited. The next chapter presents and discusses the data collected concerning the use of ADR in contract dispute settlements.



### **III. DATA PRESENTATION**

#### **A. INTRODUCTION**

This chapter presents and discusses the data collected concerning the use of Alternative Dispute Resolution (ADR) in contract dispute settlements. The data presented were gathered through a telephone and email questionnaire of 30 commercial and defense contractors. The respondents were legal professionals from the respective companies who had at least six years experience with that company. In addition, five in-depth telephone surveys were conducted as follow-ups to the initial questionnaire. The questionnaire is provided in Appendix A.

#### **B. DATA COLLECTION**

The questionnaire in Appendix A was utilized as the framework to collect pertinent data for this thesis. The participants were informed as to the nature of the study. Some of the questions were framed with responses on a scale of 1-5, while some were left open-ended to promote responses that would lead to meaningful issues for further discussions. Participants in the questionnaire provided, in

some cases, rather frank and personal views in answering the questions. As input was gathered on a non-attribution basis, the names of those individuals who responded are not included. A listing of the companies who participated in this process is provided in Appendix B.

Each of the 15 questions from the questionnaire is listed, followed by a chart or table that captures the range of responses. The scale is based on a range of 1 to 5; 1 representing "never" while 5 represents "always". A sampling of narrative responses is provided, where appropriate, followed by a summary of the information related to the respective question. Responses are in no particular order.

### **C. RESPONSES**

#### **1. Does your company employ Alternative Dispute Resolution (ADR) as a tool for the settlement of contract disputes?**

The purpose of this question was to identify those respondents who had a working knowledge of the subject matter and who would know from a company perspective the methods used to settle disputes. The responses were scaled from 1 to 5. Figure 1 shows the summary of responses obtained.



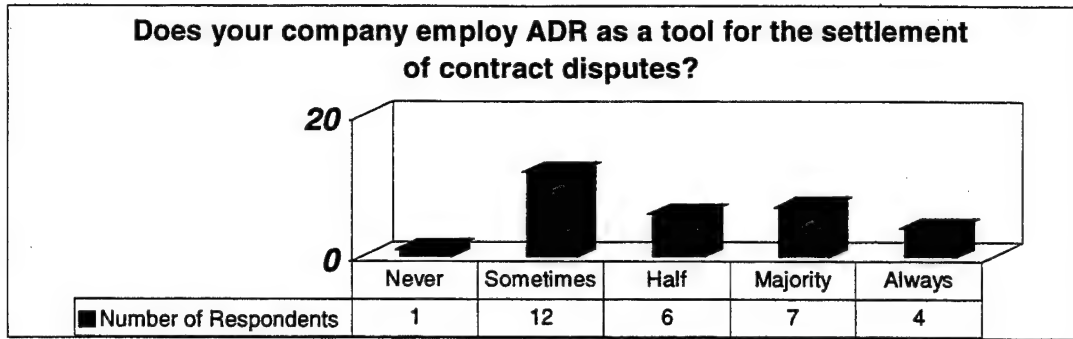


Figure 1 Employment of ADR

\*source: researcher

Never:	3.3%
Sometimes:	40.0%
Half of the time:	20.0%
Majority of the time:	23.4%
Always:	13.3%

**Summary:** The vast majority (96.7%) of companies surveyed indicated that ADR was and is used to settle contract disputes. Though not employed in all cases, the results show that ADR is commonly employed as a contract dispute settlement tool.

**2. What is your company's policy regarding ADR application and its objectives? Briefly explain.**

This question was designed to determine if the companies had established policies stipulating how and when ADR is to be used. The majority of responses (93.3%) indicated that the companies lack formal, written policies guiding them in the employment of ADR. Rather, they typically attempt to pursue non-litigation solutions when

practicable. A sample of paraphrased responses is provided below:

We have no policy per se. We look at it as and when appropriate.

Our policy is to consider using an ADR mechanism when prudent to do so, after considering several non-exclusion factors, such as: 1) expected duration of judicial procedure, 2) enforceability, 3) customer relationship, 4) availability of third party, and 5) publicity.

Our company encourages the use of ADR, particularly with respect to on going customer relationships.

We have no formal ADR policy. The company simply has a desire to resolve problems quickly and inexpensively.

There is no formal company policy. Rather, legal and business actors review the facts on a case-by-case basis to assess the utility of ADR and the ADR method that is most appropriate to the facts. Virtually all disputes go through a negotiation phase. If these negotiations fail, a decision to proceed with formal ADR or litigation is made.

The company will often pursue ADR as an alternative to litigation or as a means to settle an ongoing lawsuit. We do not have a formal policy, however.

Fundamentally, our company is in business to sell products and systems, not to litigate. We consistently seek settlement alternatives to litigation, except when proprietary information patents, and technological know-how would be jeopardized.

In addition to a general company policy favoring the use of ADR, we are a signatory to the Aerospace Defense Industry ADR Commitment and Pledge.

Our company has executed agreements with other companies to pursue ADR for all disputes that cannot be resolved through negotiation.

**Summary:** Overall, the responses indicate that few companies have instituted formal policies to guide the use or employment of ADR. The respondents indicated more of an intent established by the company, with a case by case review more essential to determining the course of action to pursue.

**3. What prompted your company to implement ADR as a tool in the dispute process? Briefly explain.**

This question was designed to substantiate the cause or need to turn to ADR as a means to settle contract disputes. The literature espoused the primary benefits being cost and time savings, enhanced control of the process, and promotion of confidentiality in the proceedings and results. The majority of respondents indicated the use of ADR arose out of need to control costs and save time. Others stipulated that the implementation of ADR was in response to customer insistence. A sample of paraphrased responses is provided below:

In general, we view ADR as a faster and less expensive way to resolve any type of dispute. In the international arena, ADR is viewed as the standard dispute resolution mechanism.

We became a signatory to the Center for Public Resources Corporate Policy Statement of Alternatives to Litigation, and thus obligated to explore ADR measures in cases with other signatories prior to pursuing litigation. In all cases, the efficient use of

resources, the desire to work with the customers and the control of litigation expenses make ADR desirable to us.

The company recognized that it was effective and efficient. Also, customers began to accept it as a viable option.

We started to become concerned about expenses and the uncertainty of jury trials.

It became recognized as a useful adjunct to conventional litigation in cases involving narrow areas of law, or the application of narrow, specific facts to the law.

Our company moved toward employment of ADR as a settlement method because of the perceived cost and time savings it would deliver. In most cases this has proved the case, however, it is not so in all cases.

The company employs ADR out of 1) desire to expedite dispute resolution process, 2) minimize costs, and 3) minimize polarization, ill will, etc.

The slightly increased appreciation of ADR by the procurement offices and Government counsel led our company to implement ADR.

Cost, time, lack of resolution, and the reality that litigation does not usually resolve disputes between business partners. Business partners, by definition have an on-going relationship. Litigation tends to end relationships rather than resolve disputes.

**Summary:** Overall, the reasons cited by the respondents are the same as those cited in the literature. Time and again, the respondents indicated that the judicial process for civil litigation has become so encumbered that they feel forced to explore other means by which settlement can be reached, or risk financial losses that far outweigh any benefit of a litigated case.

Many of the commercial companies interviewed have been participating in the ADR arena for some time. The benefit of reduced cost and time is cited as the primary purpose of using ADR, yet some respondents questioned these claims, and often stipulated that this is not always the case. A paraphrased sample of these views is provided below.

When we employ arbitration, we generally do not realize the cost savings that other methods afford.

Sometimes the introduction of ADR actually results in prolonged proceedings because the parties fail to reach consensus. When this happens, we end up resorting to litigation. The ADR techniques simply add time and expenses to the total bill.

They assert that ADR has its place, and its limitations. In cases where the other party is only pursuing ADR as a fulfillment of an advance agreement, with the preset notion of pursuing litigation, ADR simply exacerbates the problem. The use of arbitration was also seen as a generally inefficient method when seeking cost or time savings.

**4. How often is ADR involved with the settlement of disputes?**

This question was designed to determine how often companies actually use ADR techniques to resolve contract

disputes. The responses were scaled from 1 to 5. Figure 2 shows the summary of responses obtained.

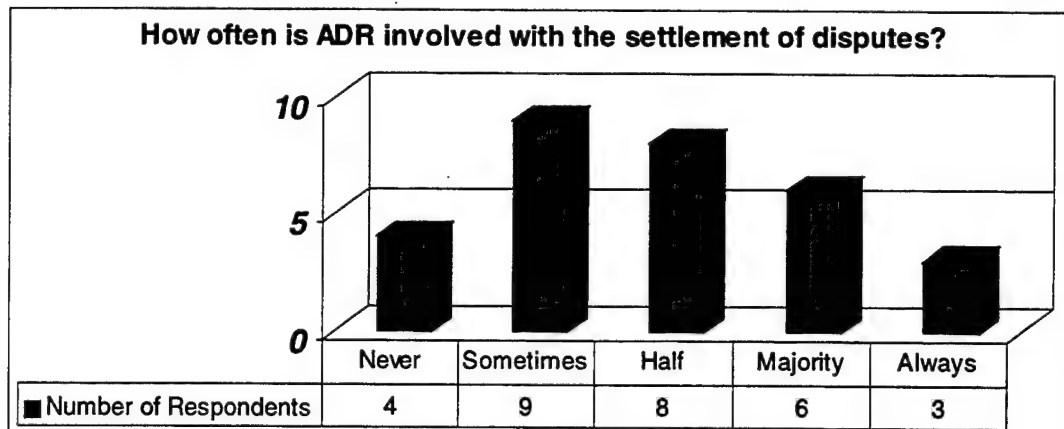


Figure 2 Involvement of ADR

\*source: researcher

Never:	13.3%
Sometimes:	30.0%
Half the time:	26.7%
Majority of time:	20.0%
Always:	10.0%

**Summary:** The scaled responses collected indicate a range of answers that seemingly covers the spectrum. The data does indicate that many companies employ ADR to settle contract disputes. The majority of responses (56.7%) do show that ADR is employed in over half of the cases encountered.

Almost to the respondent, they indicated in writing that on the scale of one to five, "sometimes" and "half the time", respectively, were the answers that best fit their company. Yet when telephonically interviewed, these same

people described a process of contract dispute settlement that invariably involved ADR. They often stated that they began the settlement process by bringing in senior level management who had the ability to make binding agreements to settle a claim. If that process failed, they would then move toward a mediation or arbitration setting in which a third party would assist in coming to consensus.

In summary, what these respondents discussed is the essence of ADR. It is informal; it is an exploration of settlement options prior to litigation; and, it brings into the equation those people who have the ability to make binding decisions on behalf of the company.

**5. How often is ADR involved with the settlement of defense related disputes?**

This question was designed to determine how often companies use ADR techniques to resolve Government contract disputes as opposed to how often it is employed in commercial cases. The responses were scaled from 1 to 5. Figure 3 shows the summary of responses obtained.

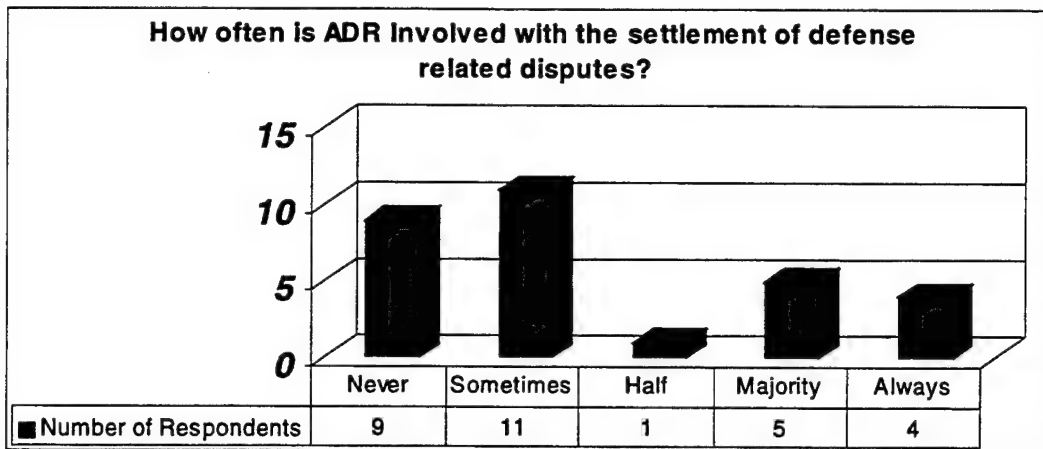


Figure 3 ADR and Defense Disputes

\*source: researcher

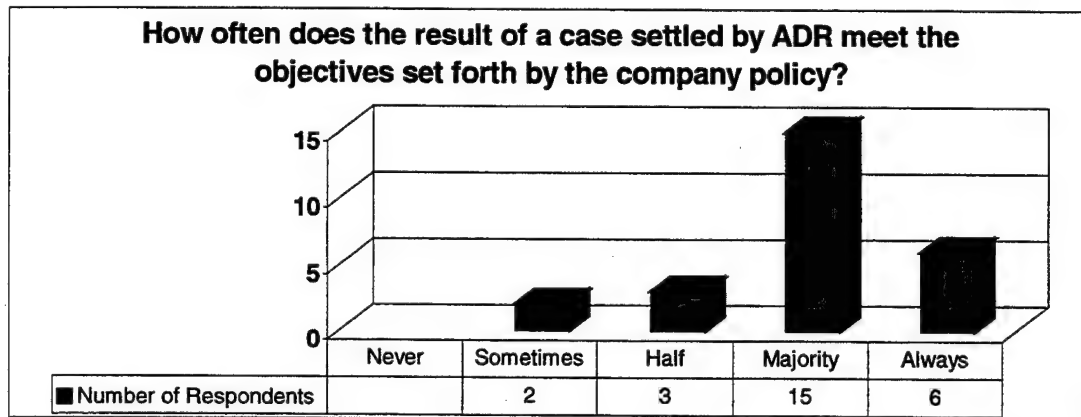
Never:	30.0%
Sometimes:	36.7%
Half the time:	3.3%
Majority of time:	16.7%
Always:	13.3%

**Summary:** The results show that while ADR is employed in the settlement of defense related contract disputes, it is employed less often than in the commercial sector. The data collected in response to this question is skewed to the left, more so than the responses to question 4 above. A look at the table shows that a significant number of defense related contract disputes never benefit from the techniques of ADR.



**6. How often does the result of a case settled by ADR meet the objectives set forth by the company policy?**

This question was designed to determine if the employment of ADR meets the goals of the company policy, be it a formal or informal policy, and if it is perceived as effective. The responses were scaled from 1 to 5. Figure 4 shows the summary of responses obtained.



**Figure 4 Obtainment of Objectives**

\* source: researcher

Never:	0.0%
Sometimes:	7.7%
Half the time:	11.5%
Majority of time:	57.7%
Always:	23.1%

**Summary:** Question 3 asked for reasons the companies chose to employ ADR. Question 6 looks at how often the results meet those objectives. This information goes to the root of the effectiveness of ADR, and the results indicate that ADR is a viable tool for contract dispute resolution.

As several respondents indicated, ADR would have to meet the objective, in general, or they would litigate.

#### 7. What technique does your company primarily use?

This question was designed to determine the techniques most often employed under ADR. Four options were specified, with room for the respondent to write in another type not listed. The responses were scaled from 1 to 5. Figure 5 shows the summary of responses obtained.

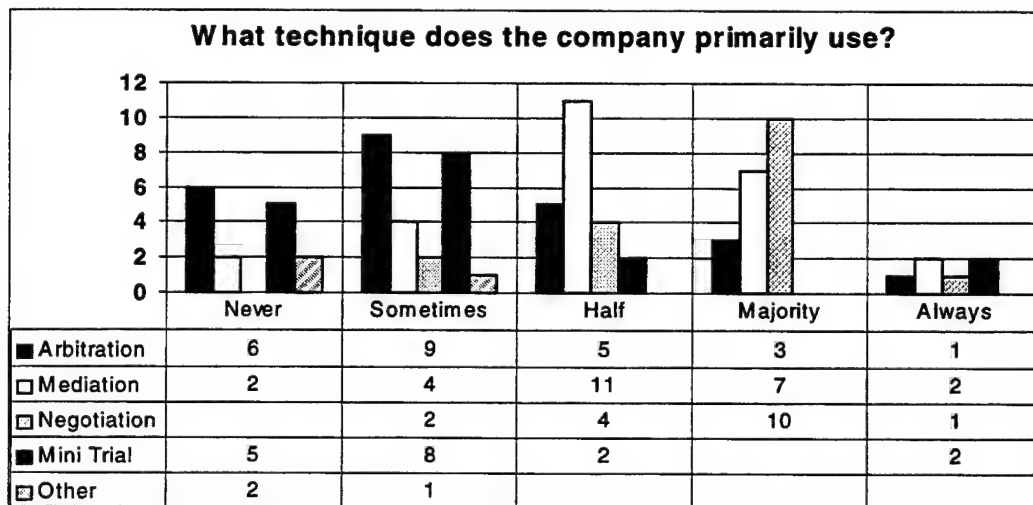


Figure 5 Techniques

\*source: researcher

**Summary:** Based on the responses, mediation and negotiation were the two most prevalent types of ADR techniques applied to contract disputes. Arbitration placed third as the preferred technique.

Respondents cited the use of a neutral third party and the informal process as the primary incentive for using mediation. Through discussions with the respondents, negotiation was typically viewed as a normal part of dispute settlement, and not seen as an ADR technique, per se.

Over two-thirds of the respondents indicated that their preference for arbitration has declined for several reasons. Typically, they cited the formality and duration as becoming too similar to litigation, and yielding little, if any improvement in the process or outcome. Not surprisingly, the seventeen percent that preferred to use arbitration are large companies with a greater share of DOD contracts.

While some claimed to not employ ADR, they often proceeded to describe the process they do use as being one that included negotiation and mediation in the normal sequence of events, indicating that its use may be even greater than what the numbers show.

**8. Who conducts the ADR, internal personnel or external?**

This question was designed to determine whom within the company conducts ADR, and if the company employs outside personnel for ADR cases. Figure 6 shows the summary of responses obtained.

**Who conducts the ADR,  
internal personnel or  
external?**

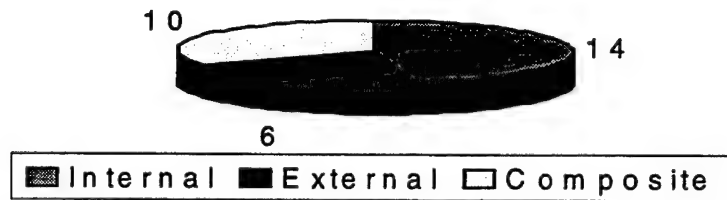


Figure 6 Source of Counsel

\*source: researcher

Internal:	46.6%
External:	20.0%
Composite:	33.3%

**Summary:** Most respondents (46.6%) indicated that their company uses internal personnel for ADR matters. However, the majority of the respondents (53.3%) indicated that their company typically employs the use of outside counsel at some point in the ADR process. They typically use internal counsel in the beginning, but bring in outside counsel for arbitration. When using mediation, the answers were typically split 50-50.

**9. If internal, how extensive is the training that the company provides?**

This question was designed to determine the degree to which companies provide training in ADR techniques to their internal personnel. The responses were scaled from 1 to 5.

Figure 7 shows the summary of responses obtained.

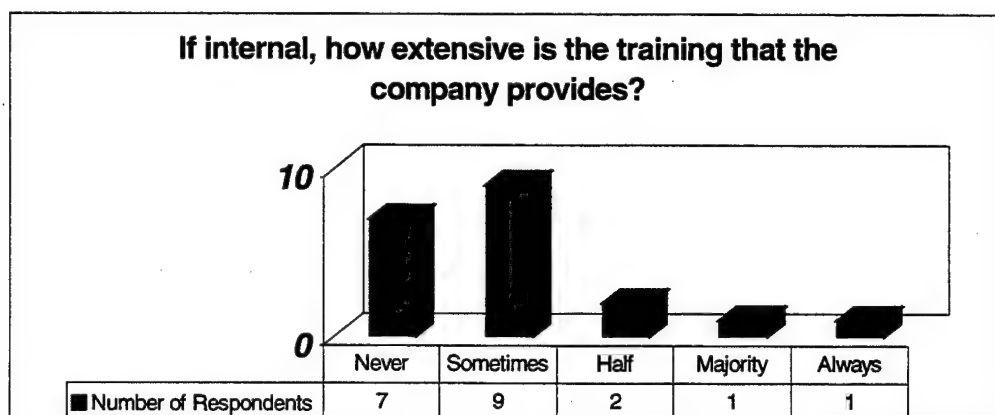


Figure 7 Training

\*source: researcher

Never:	35.0%
Sometimes:	45.0%
Half the time:	10.0%
Majority of time:	5.0%
Always:	5.0%

**Summary:** Those companies that indicated they used internal personnel rarely provided specialized training for the use of ADR. Several respondents mentioned that law schools now teach courses in mediation, arbitration, and other ADR measures, and so they don't feel the need to provide additional training. Further, some mentioned that the American Arbitration Association provides training, and so those who want it can seek it on their own time.

Typically, the respondents indicated that they did not usually see a need for specialized training, and if there were such a need, they would probably seek qualified outside counsel rather than provide the training.

**10. How broadly is ADR employed across company entities?**

This question was designed to determine the extent to which the entire company uses ADR, in the event that the respondent was an employee of a division or department within the larger company. The responses were scaled from 1 to 5. Figure 8 shows the summary of responses obtained.

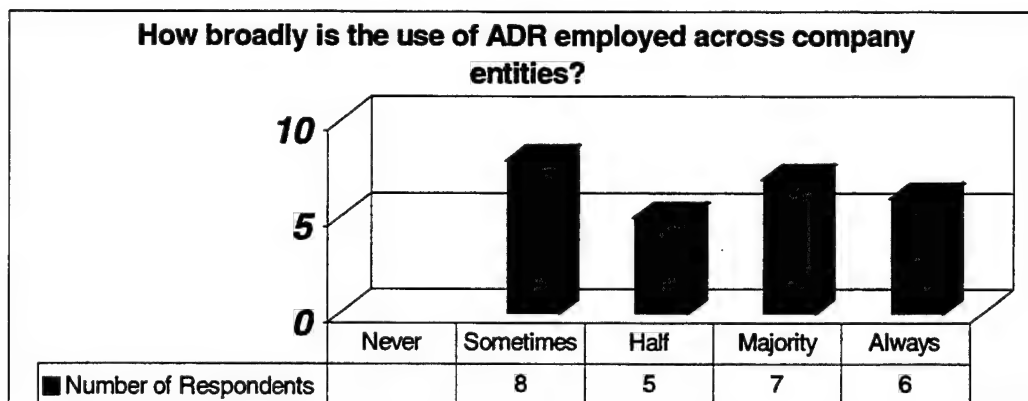


Figure 8 Company-Wide Application

\*source: researcher

Never:	0.0%
Sometimes:	30.8%
Half the time:	19.2%
Majority of time:	26.9%
Always:	23.1%

**Summary:** The responses ranged from sometimes to always, and are evenly distributed. As a result, the researcher is inclined to believe that the use of ADR is certainly not restricted to contract disputes, and has applications in other arenas. In fact, the literature pointed out that ADR is applicable to many types of disputes. The respondents themselves often times pointed out that the Human Resources department tends to use ADR techniques as its primary means of settling disputes with workers and unions.

**11. To what extent does your company require the use of ADR as a contractual provision?**

This question was designed to determine how often a company enters into contracts where ADR is required or stipulated from the onset. The responses were scaled from 1 to 5. Figure 9 shows the summary of responses obtained. The respondents were asked to scale their responses for situations in which they are the customers, the supplier, and as a comparison for commercial and Government contracts.

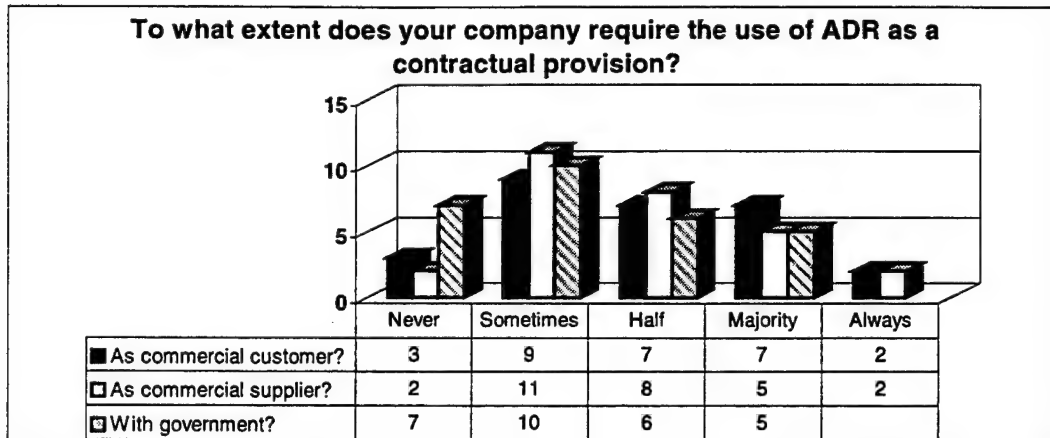


Figure 9 Use of Contractual Provisions \*source: researcher

**Summary:** The data obtained indicates that companies employ ADR provisions evenly, as a customer and as a supplier. Further, the indication is that companies are less likely to employ ADR provisions in those contracts that it has with Government entities.

**12. Is there a difference in how ADR is used with the Government versus how it is used with commercial companies? Please explain.**

This question was designed to determine if there are differences in how ADR is employed, as it relates to Government contracts or commercial contracts. The responses were scaled from 1 to 5. Figure 10 shows the summary of responses obtained.



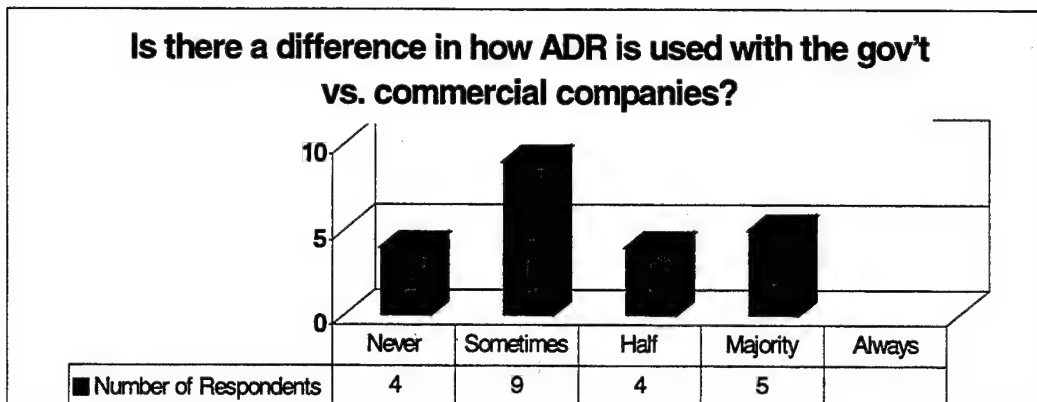


Figure 10 Difference in Use

\*source: researcher

Never:	18.2%
Sometimes:	40.9%
Half the time:	18.2%
Majority of time:	22.3%
Always:	0.0%

Additionally, some respondents provided narrative responses to this question. A sample of their paraphrased responses is provided below:

The Government usually requires the application of Government created ADR techniques/procedures rather than employing AAA rules as the commercial sector does.

The Government is slower to take advantage of ADR and makes it almost too difficult.

The larger the dollar value, the more Government bureaucracy will play into using ADR and approving the settlement. Companies usually give the principals to ADR more authority.

There is usually not much difference to the process itself; sometimes the Government is less flexible in its willingness to agree to ADR.

There is no difference with how it is used, just with the willingness on the part of the Government to use it.

Government uses more of a canned, formal process than the commercial companies.

Commercial companies are much more willing to develop a low-cost, flexible ADR process.

Virtually all contracts with the Federal Government rely on the Contract Disputes Act standard clause and do not permit any additional language. The regime in which commercial contracts are negotiated is more flexible.

The Government is generally unwilling to be bound by arbitration.

**Summary:** The respondents indicate an overall reluctance on the part of the Government to be as flexible with ADR processes as the commercial sector. Many cite the fact that it is almost impossible to get the Government to agree to binding arbitration. Often they mentioned the Government has been slow to embrace the use of ADR, and that when they did, the process was more formal and less flexible than experiences with the commercial sector revealed.

**13. How does the use of ADR by the Government promote or hinder the settlement process?**

This question was designed to determine what, if any, obstacles exist that hinder the use of ADR with the Government. A sample of paraphrased responses is provided below:

The Government has become more committed to using ADR; however, they are reluctant to use it in many cases.

The Government promotes the process because the Government representatives are forced to think in more commercial terms and act more practical and less bureaucratic in their thinking.

Few contracting officers are willing to depart from the Contract Disputes Act procedures. They are reluctant to "relinquish control."

It precludes the use of binding arbitration in most cases.

The use of ADR by the Government promotes the settlement process if the Government follows through with the process, rather than producing a series of false starts.

If the Government agencies embrace ADR as the first means available to resolve disputes, it would promote settlements earlier, thus saving time and expense.

The Government's use of ADR promotes the settlement process, and fills the void of the Board of Contract Appeals (BCA). The BCA used to be an alternative approach, but has lost that focus, so ADR must be explored.

ADR is only effective when it is inexpensive and fast. Its use with the Government typically does not allow for this.

**Summary:** The respondents delivered a balanced mix of responses to this question. Those that felt the Government hindered the process generally felt it was due to lack of willingness to use ADR at all, and cited the deep pockets of Government as the reason ADR was not embraced. Those that felt Government promoted the process spoke of the Government's recent embrace of the ADR concept, and feel

that more settlements in the future are much more likely to involve ADR. A few respondents stipulate that what hinders the use by Government is primarily the lack of understanding and training that Government procurement personnel have.

**14. How can the Government improve the ADR process?**

This question was designed to elicit feedback from the respondents as to how the Government could improve the way it uses ADR to settle contract disputes. A sample of paraphrased responses is provided below:

Use it, and be willing to accept (and be bound by) the determination of an objective third party.

A cultural change needs to take place where contacting officers feel more empowered to use ADR and to reach timely and fair settlements based on ADR that are not second-guessed.

The education about ADR and the use of ADR at lower levels (i.e. project and program heads) must take place for this concept to truly be effective.

Government's commitment must cross agency lines and clarify who makes the decision to employ ADR when more than one agency is involved. Employ third party neutrals.

Adopt a FAR change that would require ADR as a precondition to triggering the formal Contract Disputes Act process.

Provide more training to Government employees to explain the ADR techniques and demonstrate its advantages.

Agree to and use it as a matter of policy in all contact and other types of disputes.

The issue is not the process, but the access. Contracting officers and their procurement leadership should be encouraged to negotiate progressive dispute resolution clauses that don't violate the CDA. They need training and exposure.

**Summary:** While training and education were a constant theme through the responses to this question, the idea of changes to the Federal Acquisition Regulation (FAR) and other federal laws and regulations were mentioned several times. The feeling from the commercial side seems to be that the Government has talked a great deal about using ADR, and the benefits it has, but they have seen little application of it. And, as in question 13, there seems to be a feeling that the Government is reluctant to step up to the commercial way of employing binding arbitration.

**15. Any additional comments/issues?**

This question was designed to allow the respondent to comment on anything that he or she may have thought of during the course of the interview or questionnaire. A sample of paraphrased responses is provided below:

The acquisition reform initiatives of the past few years, particularly FASA and FARA, did not emphasize dispute resolution. Now that the acquisition reform furor seems to have settled down, perhaps the next area for legislative emphasis should be the CDA and its effectiveness as a dispute resolution tool.

Many disputes can be precluded with customized contractual language which commercial businesses, more

than Government agencies, are inclined to enter into upfront.

The dynamics of the Government procurement arena and the resistance of the Government to even consider ADR has tended to work against meaningful employment of ADR.

We have entered into omnibus agreements with Government agencies that stipulate the parties will seek resolution of disputes by ADR, when practicable, yet the Government has not been willing to have the language mandate the use of ADR.

#### **D. SUMMARY**

This chapter presents and discusses the questionnaire and interview data collected concerning the use of ADR in contract dispute settlements. The data are a compilation of input from thirty respondents from commercial and defense contractors. The data are summarized in tables and when appropriate, paraphrased narrative responses are provided. Chapter 4 analyzes the information presented here.

## **IV. DATA ANALYSIS**

### **A. INTRODUCTION**

This chapter analyzes the data presented in Chapter III. It ties together the information obtained through the research. The data is grouped into three broad categories: employment of Alternative Dispute Resolution (ADR), the preferred method, and barriers and incentives.

### **B. EMPLOYMENT OF ADR**

As indicated by the data obtained in response to question 1, 4, and 6, the use of ADR to settle contract disputes is widespread throughout the defense industry. All but one company indicated they use ADR to settle such disputes. ADR methods and techniques are well suited to the potentially adversarial environments that may exist when disputes arise, and serve to bring about a fair resolution while also preserving relationships for future business transactions. This researcher therefore feels that ADR has become accepted as a viable method to settle contract disputes.

The companies surveyed have employed ADR on average for about nine years, according to their feedback to the questionnaire. They chose to use ADR because the results produced from using alternatives to litigation proved to be both efficient and effective. In the survey, 91% of the cases in which ADR was applied satisfied the objectives set forth by the company. Additionally, 86% of the respondents indicated ADR was a less expensive and a less time consuming option, echoing the benefits described in the literature.

Over time, more companies have turned to ADR. As this practice became more common, the Government entities who dealt with commercial companies were encouraged to participate by using ADR as the first step in trying to resolve disputes.

While no respondents could substantiate the cost and time benefits, they could cite examples of cases their company had resolved in a matter of hours or days using an ADR technique. These examples provided all the validation they needed to believe in the process.

At the same time, there were those who echoed the benefits of reduced time delays and reduced costs cited by the literature, but were also skeptical about these benefits as a given. If entered into in bad faith, ADR could simply become a stall tactic, and thereby prolong the eventual



litigation process that was to follow. Arbitration typically led to a process that was almost as formal as a trial, with the rules of evidence, the testimony of witnesses, and the entire process being too similar to a court trial to reap the benefits of ADR. In these cases, ADR and the benefits associated with the use of ADR fall short of its intended outcomes, and ultimately yields a result similar to that obtained through litigation.

In terms of policy use and guidance, it is interesting to note is that while the use of ADR is widespread, the policies governing its use are not very specific, and serve to allow the companies great latitude in determining when and how to employ ADR. The feedback from question 2 highlights this fact. The policies governing its use by commercial companies are very informal, and thus provide a great deal of flexibility when determining how and when to use it. The companies are more focused on heightening awareness of ADR as a tool than they are on mandating its use. Thus, the application of ADR by commercial companies seems to be as informal as the ADR process itself.

This is an important learning point for the Government to heed. While defense contractors and other commercial companies employ ADR, their use of it is flexible and tailored. The policies are general, not specific and rigid.

The Government must ensure that its policy is flexible as well, and allows for the parties to tailor the process as needed.

According to the literature, ADR has the intention of being less formalized than litigation, and therefore less time consuming and costly, with less emphasis on the rules of evidence, procedures, and practices. It is from this aspect that ADR obtains its flexibility and attractiveness.

This researcher feels that institutionalization of the ADR process would slowly cause a decay of flexibility now achieved in the selective employment of it. In the case of the Armed Services Board of Contract Appeals (ASBCA), it too was originally developed as an informal means for parties to resolve disputes they may have with Government entities [Ref. 6]. This original conception has become institutionalized over the years, and taken on more of a formal court process, to the point where we are now seeking alternative methods to the ASBCA as a dispute resolution process.

When asked about employing ADR as a contractual provision (question 11), the results were evenly spread among the defense contractors in terms of their requirement to stipulate its use when both a supplier and a customer. 53% of the respondents replied that they use it as a

contractual provision as a supplier, while 57% replied that they used it as a contractual provision as a customer. The significant difference came in the responses to requiring the use of ADR as a contractual provision when dealing with the Government. Only 39% replied that they use ADR contract provisions with the Government. The researcher believes this is due largely to the unwillingness of the Government to sign up in advance to the use of ADR because to do so may result in the Government giving up some of the rights it maintains under the judicial system. As a result, Government agencies are not reaping the benefits of ADR like the commercial sector.

Several respondents mentioned their use of advance agreements with the U.S. Air Force. These advance agreements stipulated that the parties involved would use ADR in the event disputes arose, and laid out general guidelines about what techniques would be allowed and the steps they would take. By using the advance agreements, both parties understood the settlement process, and were more willing to accept the results it produced. This researcher feels that the use of these advance agreements is a way the Government can improve its use of ADR, and thereby better realize the true benefits of employing ADR.

### **C. PREFERRED METHOD**

In the literature review it was highlighted that mediation and negotiation were the preferred methods of ADR. The survey results from question 7 reinforced that information. In fact, 88.2% of the respondents indicated that they employed negotiation in over half of all cases involving ADR, while 76.9% indicated they applied mediation in over half of all cases involving ADR. Arbitration was only sought out by 36% of the respondents in over half of the cases involving ADR, and only 23.5% of the respondents indicated that they employed the use of mini-trials in over half of the cases involving ADR.

Interestingly, from the responses to question 7, most of the companies that preferred to use arbitration were large defense contractors, while those that preferred mediation and negotiation were middle to small size defense contractors who very seldom sought litigation as a solution to disputes. A possible motive for this preference may be that large defense contractors are more willing to go to litigation because they have the resources to undertake such a costly endeavor, while the small firms could not withstand such a costly process as easily. Another reason may be that

large defense contractors have more programs underway, across which it can spread the cost of a lengthy litigation.

This information highlights the preference of defense contractors to employ negotiation and mediation, and underscores the comments that arbitration is less sought after. This is perhaps due in large part to the higher costs and time delays experienced by those who have used arbitration in the past. And while the literature brought out the high level of use of the mini-trial method by Government entities, the defense contractors prefer this method far less. The reason for this may well center around the perception that mini-trials are a more formal process, and that experience and success with negotiation and mediation has caused the commercial sector to stick with what they know and utilize the less formal processes at their disposal.

#### **D. INCENTIVES AND BARRIERS**

While the results of the survey indicate a strong level of usage of ADR by defense companies in settling contract disputes, there are significant incentives to using ADR that exist.

Many of the legal counsels and corporate hierarchy support the use of ADR when applicable. Some of these

companies have even forged alliances or become signatories to industry agreements that name them as willing participants in the exploration of resolutions through alternative means.

Hand in hand with that is the legislation passed over the past five years by Federal and State Governments that make it easier for these agencies to accept ADR clauses and efforts. This push has served as encouragement to the commercial sector, as well, and fuels the growth of ADR in all business dealings.

And lastly, the literature about ADR often times includes claims of reduced costs and time, and enhancement of business relationships by achieving more mutually acceptable settlements. While the quantitative data has been sparse, the idea seems to be accepted. Over time, as more companies partake in this process, the experience derived from participating in this process will serve to enhance its acceptance even more.

While these incentives encourage the use and perpetuate its acceptance, there are barriers that will preclude its use or application if not addressed.

Of most significance is the fact that the Government's employment and use of ADR will never be exactly like that of the commercial sector. The Federal Government operates on

behalf of the people, and therefore has a different set of rules by which it must abide. It has unique considerations, and is protected by a system of checks and balances, laws and regulations, that exist to ensure the taxpayer's money is not wasted, and the rights of the Government are protected. This researcher believes that it is for these reasons that the Government agencies are often reluctant to sign up to ADR. Therefore, defense companies feel that the Government talks ADR, but doesn't use it.

At the same time, the defense contractors seem to have a distorted picture of what ADR encompasses. When answering question 4 of the survey, respondents gave mixed replies. This lack of knowledge or understanding serves as a barrier, too. Several times during the execution of telephone surveys, respondents would indicate a low level of ADR usage by their company, sighting "sometimes" or "never" as the category most appropriately describing their employment of ADR. They would then proceed to describe the system they have in place in lieu of an ADR policy. This system invariably included low level discussions immediately upon the discovery of a dispute. If these discussions were not successful, then upper level management would get involved in discussion, which would lead to a round of mediation if needed. After that point, on a case by case basis the

company would determine whether to pursue arbitration or litigation. The researcher therefore believes that defense contractors are employing ADR measures without even being aware they are doing so. This lack of understanding may be responsible for skewed data about the level or frequency of use of ADR measures. It may also serve to impede improvement of ADR procedures and enhancement of ADR results.

Another barrier that surfaced during the surveys was that a small number of corporate executives were described as being resistant to the use of ADR by their counsel. In these few cases the researcher feels that the companies preferred litigation as the means to settle disputes because the use of ADR required them to give up too many of their legal rights, and made appeals difficult. This resistance on their part compounds the problem when other defense companies report their lack of use as a result of unwilling parties. The domino effect stifles the spread of ADR and again limits its growth.

These barriers have the potential to severely limit the growth of ADR, and thus reduce the savings in terms of cost and time for the Government.



## **E. IMPLICATIONS**

From the data provided in response to the survey, five issues become apparent. First, defense contractors do not employ ADR to the same degree with Federal agencies as with other commercial companies. This implies that Federal agencies are not realizing the true potential of ADR. Secondly, employment of ADR will be improved through the use of advance agreements by Federal agencies. These agreements serve to outline the process to be used should a dispute arise. Thirdly, mediation and negotiation are the preferred techniques, and thus should serve as the focus of Government training and education objectives. Fourth, there is still a need for Federal agencies to train and educate not only its procurement and legal counsel, but to inform and educate the companies it does business with. The lack of thorough understanding by the defense industry respondents shows that there is room to enhance the knowledge of those who are in the best position to employ ADR, subsequently improving the outcomes realized. Finally, Federal agencies must be willing to use the techniques that make up ADR and employ them to gain experience and confidence in the process. Within these agencies, a champion of the process is essential to encouraging its use and facilitating the training required.

## **F. SUMMARY**

This chapter examined the defense industry's responses to questions regarding the use of ADR as it relates to contract dispute settlement. Chapter V presents the conclusions and recommendations stemming from this research, and answers the primary and secondary questions. It goes on to suggest areas of further research.

## **V. CONCLUSIONS AND RECOMMENDATIONS**

### **A. CONCLUSIONS**

Since the mid-1980s, the Federal Government has passed several legislative acts (e.g. Alternative Dispute Resolution Act of 1990) and executive orders in an effort to move Government agencies away from cumbersome and costly litigation practices and toward employment of more flexible and mutually acceptable dispute resolution measures. While the Government entities appear slow to fully apply these measures, the defense contractors with which it conducts business have been employing them with success, in some cases for upwards of nine to twelve years.

The Federal Government has much to learn from the commercial application of these measures. While restricted from doing business exactly like the commercial sector, the Federal Government stands to gain by applying some of these lessons in a prudent manner. By doing so, it will begin to realize its goal of increasing the base of commercial companies that wish to do business with the Federal Government, and ultimately increase competition.

As a result of the research, the following conclusions have been drawn. Their sequence does not suggest any significance:

**1. Mediation is the preferred method of ADR, thus this is the area Government agencies should focus on when designing ADR policies or agreements.** A majority of Defense contractors indicated that they employ mediation most often, and that it yields acceptable results. The literature highlighted, and the survey supported, the declining use and preference of arbitration as an alternative method.

Defense contractors often mentioned that Government agencies were reluctant to enter into binding arbitration. This underscores the need to identify and employ other techniques as a means to develop mutually acceptable methods of alternative dispute resolution if the Federal Government is to capture the true benefits associated with avoiding litigation.

**2. Continued training and education of Government contracting officers and defense contractors is required.** The Federal Government has been educating and training procurement officials and legal counsel on the ADR process, but there is more yet to be done. Often times during the conduct of the survey, legal counsels for the defense contractors mentioned an unwillingness on the part of the

Government's side to enter into ADR. This unwillingness, they thought, stemmed from their lack of experience and understanding of how to use ADR techniques and when they were applicable.

While this may be true, or may only be a perception, the Government agencies must do a better job of conveying their reasons for not entering into ADR or their preference for other measures. They must also be more willing to apply the use of ADR. To do this requires training and experience on the part of the Government Contracting Officers and legal counsel.

**3. The use of Advance Agreements greatly facilitates the use of ADR.** Those defense contractors who mentioned they were signatories to industry advance agreements indicated that as such, they were obligated to explore the use of alternative measures to settle disputes. This in turn led to a higher level of ADR usage, and resulted in realization of its benefits. The Federal Government stands to benefit from the use of such crafted advance agreements. The Air Force has utilized these advance agreements with some defense contractors, demonstrating that it can be done.

As mentioned in the literature and reinforced by the survey, these agreements work best when they identify or outline a process, but avoid the inclusion of restrictive,

step-by-step instructions for how the companies or parties will conduct the process.

**4. An agency or company champion of the ADR process is required for that organization if they are to truly realize its benefits.** When companies lack commitment to an idea, the use of that idea is only sporadically employed. This is much the case of ADR. Counsel that labeled their corporate hierarchy as reluctant or indifferent to the employment of ADR also identified a lower level of its application across company departments and divisions.

**5. Government agencies are not reaping the benefits of ADR to the extent the commercial sector is.** The results of the survey point out that the application of ADR to Government agencies is less than that to commercial industry. The respondents cited various reasons, from lack of experience and understanding, to the difficulty in obtaining agreement through the chain of command to the decisions rendered. Overall, the Federal Government makes the use of ADR more difficult than the commercial sector.

## **B. RECOMMENDATIONS**

The following recommendations are offered by the researcher and are based on the researcher's assessment of

the literature review, the survey responses, and the interviews conducted.

1. **The Federal Government should move towards using mediation and away from using arbitration when deciding what method of ADR to employ.** The defense industry has an established track record with using ADR, and has now begun to move away from arbitration. The Government has been reluctant to employ arbitration, and apparently has valid reasons for doing so.

2. **Training for Government and commercial contracting personnel, and procurement personnel, should continue.** The level of awareness and experience is still lacking, and therefore requires more effort. This training should emphasis mediation, however, it should still cover other methods of ADR. Only through the continued education and training of Government personnel will attitudes change, experience levels rise, and the likelihood of successfully employing ADR increase.

3. **The Government should develop and use advance agreements with defense contractors.** These agreements should outline acceptable processes and identify methods to be used in the event disputes arise. While the FAR (part 33) does allow for the use of ADR and include clauses to be

used, it does not outline a process or identify the parties that are required to participate. By doing this up front and early in the contract process, the path is paved to employ ADR more readily, thereby enhancing the ability of both parties to truly realize the benefits of a dispute settled through the use of ADR.

The challenge that lies ahead is to embrace those commercial practices that benefit both parties while not increasing the risk for one side or the other. The use of ADR is one such practice. The commercial sector has much more experience applying ADR, and it is this experience the Government must tap into. Empowerment of contracting personnel and prudent risk taking are concepts espoused by the literature supporting acquisition reforms, and must be put into practice if results are to be realized and progress is to be made.

### **C. SUMMARY OF RESEARCH QUESTIONS**

In order to accomplish the objectives of this study, the following research questions were pursued.

1. Primary Research Question. **To what extent does the defense industry employ Alternative Dispute Resolution in settling commercial and Government contract disputes, and**



**how can the Government use this information to improve its ADR process?**

The defense industry employs ADR in about half of all its commercial contract disputes. It employs ADR significantly less often in its defense contract disputes. The reasons for this vary, and are discussed in chapter 4. The results of the survey indicate that the Government has room to improve its use of ADR. By using ADR clauses in advance agreements, as a contract provision, and more often, the Government will begin to realize the true benefit of ADR. Through continued training of personnel and increased use of mediation and negotiation as means to settle disputes, the Government will make itself a more inviting partner to the commercial sector.

**2. Secondary Research Question #1. What are company policies with respect to industry's use of ADR?**

Overwhelmingly, the majority of defense companies surveyed lack formal policies outlining rules for the use of ADR to settle contract disputes. Rather, the companies have chosen to ensure that corporate counsel and purchasing departments are aware of and encouraged to employ the techniques that encompass ADR in the pursuit of dispute settlements.

3. Secondary Research Question #2. **What prompted industry to employ ADR as a means to settle contract disputes?**

Industry undertook the use of ADR out of need to control the costs of litigation and to bring about more timely resolutions to disputes. In addition, as the scale of competition expanded from national to global, the defense industry identified a need to protect its partnerships and alliances by improving the way they settle disputes and grievances. ADR and the techniques that make up ADR provide that ability to them, while also allowing for the companies themselves to exert more control over the process. This allowed them to realize more equitable, fair, and timely results.

4. Secondary Research Question #3. **What methods of ADR do companies primarily employ?**

Primarily, the defense industry employs mediation and negotiation as its preferred ADR technique. These companies use arbitration in many cases, however, they are beginning to scale back its employment in lieu of mediation and negotiation. They have done so because experience has shown arbitration to be less of time savings or cost savings, while also becoming more formalized and cumbersome.

5. Secondary Research Question #4. **To what extent is the use of ADR stipulated on a pre-contractual basis?**

Whether a customer or a supplier, the defense industry stipulates the use of ADR on a pre-contractual basis on about 54% of its contracts. This contrasts with the frequency with which they stipulate its use with the Government. In these instances, it is stipulated on a pre-contractual basis more than one-third of the time. The primary reason cited for this is the Government's reluctance to sign up to this.

6. Secondary Research Question #5. **How often is ADR employed when the company is the supplier? When the company is the customer?**

When a company employs ADR, research suggests that the company employs it equally whether it is as a supplier or as a customer. The limitation of its use or employment is centered around the willingness of the other party, rather than the roles of the parties, to engage in ADR.

7. Secondary Research Question #6. **What are the current incentives and barriers that promote and/or hinder the use of ADR?**

The primary barrier is lack of understanding or knowledge about ADR and what it entails, the techniques that

constitute ADR, and the ability to recognize when it could be applied. Additionally, the unique contracting rules that apply to Federal agencies causes the application of ADR to be somewhat more restrictive than for the defense industry. This leads defense companies to feel that the Government is not as willing or flexible to use ADR.

Incentives that exist include federal legislation and flexible corporate policies, coupled with the resource benefits realized from the use of ADR.

The passage of the ADRA ACT of 1990, as amended in 1995, and 1998, along with the passage of FASA and FARA have served to compel and encourage Federal agencies to embrace and employ the use of ADR to resolve contract disputes. Furthermore, the requirements for federal courts to put in place mediation or arbitration programs to assist with settlement and ease the burden of court dockets has resulted in a more wide-spread use and awareness of the ADR process.

The commercial sector has been a long-time user of ADR, and has put in place flexible and informal guidance encouraging their people to use alternative methods in the pursuit of settlements. As a result, they have become experienced and familiar with the use of ADR, and are more willing than federal agencies to use it.

8. Secondary Research Question #7. **How can the Government improve its ADR program?**

The Government can improve its ADR program by continuing to train and educate Federal agency personnel in the use of ADR. From the Government contracting officer to the program manager and the general counsel, the Government personnel settling disputes must become familiar and receptive to the idea of using ADR.

The Government needs to explore the use of advance agreements much as the commercial sector does. This serves to identify from the beginning the process and methods that will be used should a dispute arise. This would greatly assist the Government by removing the need to explore methods and processes as the disputes arise, and enhance the relationship with industry.

And finally, the Government needs to focus its attention on the use of mediation when considering advance agreements and training its personnel. The use of arbitration poses risks to the Government and does not provide the true cost or time savings that could be realized under ADR.

#### **D. ADDITIONAL AREAS OF RESEARCH**

This research assesses the use of ADR by the defense industry and identifies perceived ADR incentives and barriers. The following areas warrant further research:

1. Analysis of the impact ADR has had on reducing the backlog of cases or the timeliness of trials within the federal courts.

2. Analysis of the cost/benefits achieved as a result of applying the various ADR methods to Government contracting disputes.

3. Analysis of several successfully mediated contract disputes to identify successful methods of employing mediation. This would provide a useable base of information for Government Contracting Officers and perhaps develop a framework to reference when deciding how best to employ mediation.

## APPENDIX A: QUESTIONNAIRE

### MEMORANDUM

From: Captain Marc Begin, USMC  
To:

Subj: Alternative Dispute Resolution (ADR) Questionnaire

Thank you for the opportunity to speak with you about ADR and its application to your company's disputes settlement process. Let me take this time to give you some information about myself and the use of this survey.

As I mentioned, I am a student in the Acquisition and Contract Curriculum at the Naval Postgraduate School. I am currently doing research for a thesis about ADR, specifically its use by the defense industry in settling contracting disputes, be it with commercial or defense entities. My primary question is, "To what extent does the defense industry employ ADR in settling contract disputes and what can the Government learn from this."

Please take a look at this survey. It is a short questionnaire that can be answered in about 15 minutes. The information derived from this will be compiled and analyzed by myself, with no disclosure of identities of the people or companies represented. It is simply a tool for me to use to gather data.

I appreciate your support, and recognize that your time is valuable. The information you provide is of great importance to me and will be instrumental to the body of my research.

Should you need to contact me, I can be reached at home by phone at (XXX) XXX-XXXX, or by email at [mabegin@nps.navy.mil](mailto:mabegin@nps.navy.mil).

Sincerely,

Marc Begin

### SURVEY/INTERVIEW OF INDUSTRY FOR INFORMATION ABOUT ADR

This survey is intended to solicit information regarding the use of ADR in contract dispute settlements. Further, it is to gain insight into ideas and concerns about the use of this technique as an effective and viable tool for Government and commercial disputes. Please take a few moments to provide me with your honest responses.

	<u>Quantitative</u>	<u>Qualitative</u>
1=	0 to 20%	never
2=	21 to 40%	sometimes
3=	41 to 60%	half of the time
4=	61 to 80%	majority of time
5=	81 to 100%	always

1. Does your company employ Alternative Dispute Resolution (ADR) as a tool for the settlement of contract disputes?

1 2 3 4 5

2. What is your company's policy regarding its application and its objectives? Briefly explain.

3. What prompted your company to implement ADR as a tool in the dispute process? Briefly explain.

4. How often is ADR involved with the settlement of disputes?

1 2 3 4 5

5. How often is ADR involved with the settlement of defense related disputes?

1 2 3 4 5

6. How often does the result of a case settled by ADR meet the objectives set forth by the company policy?

1 2 3 4 5



7. What technique does the company primarily use:

a. Arbitration	1	2	3	4	5
b. Mediation	1	2	3	4	5
c. Negotiation	1	2	3	4	5
d. Mini trial	1	2	3	4	5
e. Other_____	1	2	3	4	5

8. Who conducts the ADR, internal personnel or external?

9. If internal, how extensive is the training that the company provides?

1	2	3	4	5
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10. How broadly is the use of ADR employed across company entities?

1	2	3	4	5
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11. To what extent does your company require the use of ADR as a contractual provision?

1	2	3	4	5	
a. As a customer?	1	2	3	4	5
b. As a supplier?	1	2	3	4	5
c. With Government versus commercial industry?	1	2	3	4	5

12. Is there a difference in how ADR is used with the Government versus how it is used with commercial companies? Please explain.

1	2	3	4	5
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13. How does the use of ADR by the Government promote or hinder the settlement process?

14. How can the Government improve the ADR process?

15. Any additional comments/issues?

## APPENDIX B

### LIST OF COMPANIES THAT CONTRIBUTED TO SURVEY RESULTS

1. Alliant Techsystems
2. CBS Corporation
3. Raytheon
4. Boeing
5. Harris Corporation
6. UDLP
7. IBM
8. Lockheed Martin
9. Loral
10. ITT
11. CSC
12. Lockheed Martin/Sanders
13. Lucent
14. UTC
15. Lenier
16. Motorola
17. Teledyne
18. Rockwell
19. Marconi Aerospace
20. Tenneco
21. Textron

- 22. Litton
- 23. Thiokol
- 24. McDermott Inc.
- 25. General Dynamics
- 26. Northrop Grumman
- 27. Allied-Signal Aerospace Corporation
- 28. Honeywell
- 29. TRW
- 30. Logicon

## LIST OF REFERENCES

1. Metzger, David P. and Yukins, Christopher R., "Using Alternative Dispute Resolution to Streamline Contract Claims," Contract Management, Jan 1999.
2. U. S. Congress. Senate. Report of the Committee on Governmental Affairs. Administrative Dispute Resolution Act. S. Rept. 543, 101<sup>st</sup> Congress, 2d Session.
3. "A Beginner's Guide to ADR," @<http://www.adr.org>, February 10, 1999.
4. U. S. Congress. Senate. Report of the Committee on the Judiciary. Contract Disputes Act of 1978. S. Rept. 1118, 95<sup>th</sup> Congress, 2d session.
5. Bednar, Richard J., "Government Contracting Officers Should make greater use of Alternative Disputes Resolution Techniques," Challenge Monograph Series, Vol. 4, National Contract Management Association, Vienna, VA., 1990.
6. Eaton, David S., "Alternative Dispute Resolution: A Viable Method for Settling Government Contract Disputes," Master's Thesis, Naval Postgraduate School, June 1993.
7. U. S. Congress. Senate. Report of the Committee on Governmental Affairs. Administrative Dispute Resolution Act of 1995. S. Rept. 1224, 104<sup>th</sup> Congress, First Session.
8. Carr, Frank, DeLanoy, James T., and McDade, Joseph M., "Alternative Dispute Resolution: A Streamlines Approach to Resolving Differences," Contract Management, Feb 1995.
9. United States Congress, Federal Acquisition Streamlining Act, Law 103-355, 103<sup>rd</sup> Congress, 2d Session, 1994.
10. Christian, Michael C., "The Role of Mediation in Resolving Contract Disputes," Master's Thesis, Naval Postgraduate School, Dec 1997.
11. U. S. Congress. House of Representatives. Report of the Committee on the Judiciary. Alternative Dispute

Resolution Act of 1998. H. Rept. 3528, 105<sup>th</sup> Congress, 2d Session.

12. Dauer, "Litigation v. Alternative Dispute Resolution-Let's Talk About It," Colorado Law, Vol. 17, 1988.
13. Goodman, Allan H., "Alternative Dispute Resolution at the General Services Administration Board of Contract Appeals," Board of Contract Appeal Judges Seminar, April 1997.
14. VanLuit, Frederick M., "Alternative Dispute Resolution: A Case Analysis Of A Negotiated Settlement," Master Thesis, Naval Postgraduate School, June 1994.
15. Bedman, William L., "From Litigation to ADR: Brown and Root's Experience," @<http://www.adr.org>, Feb 1999.
16. Hopper, Patrick F., L'Heureux, Richard A., and Long, Andre, "Dispute Resolutions: What Does It Take to Succeed with ADR?," National Contract Management Journal, pp. 1-7, Vol. 27, 1996.
17. Carr, Frank, "How To Design a Dispute Resolution Program," Alternatives, pp. 36-43, Vol. 12, March 1994.
18. United States Air Force, Office of General Counsel, Guidelines for Using Alternative Dispute Resolution Techniques to Resolve Contract Disputes, June 1994.
19. Seminar on Alternative Dispute Resolution, Use ADR to Improve Contract Performance, OFPP, Washington D.C.

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